

STATE OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES  
DIVISION OF RESOURCES PLANNING

—0—

SECOND SUPPLEMENT  
TO  
STATE WATER RESOURCES BOARD BULLETIN NO. 11  
SAN JOAQUIN COUNTY INVESTIGATION

BASIC DATA  
CALAVERAS UNIT  
1955-56

—0—

GOODWIN J. KNIGHT  
Governor

HARVEY O. BANKS  
Director of Water Resources





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STATE OF CALIFORNIA  
**Department of Water Resources**  
SACRAMENTO

April 20, 1957

Stockton and East San Joaquin Water  
Conservation District  
Bank of America Building  
Stockton, California

Gentlemen:

There is transmitted herewith the Second Supplement to State  
Water Resources Board Bulletin No. 11, "San Joaquin County Investigation".

Bulletin No. 11 contains an inventory of water supply, water  
utilization, cost estimates and plans for water development works for those  
areas of the valley floor in San Joaquin County lying east of the delta  
and north of the South San Joaquin and Oakdale Irrigation Districts.

This supplement contains basic hydrologic data for the period  
of fall, 1955, through spring, 1956, for the Calaveras Unit. The agree-  
ment for this fiscal year did not provide for the collection of data in  
the Littlejohns Unit as in the previous year.

The data were collected and this supplement prepared in accord-  
ance with the terms of a cooperative agreement entered into October 1,  
1955, between the State Water Resources Board, the Stockton and East San  
Joaquin Water Conservation District, and the Department of Public Works  
of the State of California, acting through the agency of the State Engi-  
neer. Subsequent organization changes with respect to the State Water  
Resources Board and the State Engineer are shown hereinafter.

Very truly yours,

A handwritten signature in ink, appearing to read "Harvey O. Banks".

HARVEY O. BANKS  
Director



O R G A N I Z A T I O N  
STATE DEPARTMENT OF WATER RESOURCES  
DIVISION OF RESOURCES PLANNING

Harvey O. Banks - - - - - Director of Water Resources  
William L. Berry - - - - - Chief, Division of Resources Planning  
Irvin M. Ingerson - - - - - Chief, Engineering and Data Services Branch

This supplement was prepared  
in the Hydraulic Section  
under the direction of

Charles A. McCullough  
Supervising Hydraulic Engineer

by

William J. Sebrell  
Associate Hydrographer

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Mark Nosler, Chief Counsel  
F. J. Murphy, Acting Chief, Division of Administration  
Isabel C. Nessler, Coordinator of Reports



P R I O R  
O R G A N I Z A T I O N S

Prior to establishment of the Department of Water Resources on July 5, 1956, the following organizational positions were in effect under the Division of Water Resources and the State Water Resources Board.

DIVISION OF WATER RESOURCES

Harvey O. Banks - - - - -	State Engineer
William L. Berry - - - - -	Assistant State Engineer
John M. Haley - - - - -	Principal Hydraulic Engineer
Albert J. Dolcini - - - - -	Senior Hydraulic Engineer
Harold B. Knight - - - - -	Junior Civil Engineer
Henry Holsinger - - - - -	Principal Attorney
T. R. Merryweather - - - - -	Administrative Officer

STATE WATER RESOURCES BOARD

Clair A. Hill, Chairman, Redding	
R. V. Miekle, Vice Chairman, Turlock	
A. Frew, King City	W. P. Rich, Marysville
C. A. Griffith, Azusa	W. Penn Rowe, San Bernardino
Phil D. Swing, San Diego	



## AUTHORIZATION AND SCOPE

This second supplement to State Water Resources Board Bulletin No. 11, "San Joaquin County Investigation", was prepared in accordance with the terms of an agreement entered into as of October 1, 1955, between the State Water Resources Board, the Stockton and East San Joaquin Water Conservation District, and the Department of Public Works of the State of California acting through the agency of the State Engineer. A copy of this agreement is included as an appendix to this supplement.

Subsequent to the execution of this agreement the duties of the State Water Resources Board and of the State Engineer were transferred to the Department of Water Resources on July 5, 1956.

The work performed under the agreement consists of the collection of basic hydrologic data in the Calaveras Unit during the fall of 1955 through the spring of 1956. This agreement for the fiscal year of 1955-56, in contrast to the previous year's agreements, does not provide for the collection of basic data in the Littlejohns Unit.

Table 1 of this supplement contains a tabulation of depths to ground water measured at selected wells in the Calaveras Unit. Partial and complete mineral analyses of ground water for the same unit are presented in Tables 2 and 3, respectively.

It is noted in Bulletin No. 11 that water quality throughout the Calaveras Unit is generally of excellent quality with the exception of certain deep wells in the vicinity of Stockton. The analyses listed in the aforementioned tables have been confined to the area in which there is a known quality problem.

## TOPIC: *THE PRACTICE OF POLYGRAPHY*

What is the best method of questioning a suspect?

What is the best way to conduct a polygraph examination? How can I get the best results from a polygraph examination?

How do I get the best results from a polygraph examination? What is the best way to conduct a polygraph examination?

What is the best way to conduct a polygraph examination? What is the best way to conduct a polygraph examination?

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Tables 4 through 8 contain 1955 runoff data at gaging stations located on the Calaveras River, Mormon Slough, and Stockton Diverting Canal. These runoff records are preliminary and subject to revision. Final 1955 runoff records, diversion amounts from Calaveras River, Mormon Slough, Stockton Diverting Canal, and complete mineral analyses of water samples obtained from the Calaveras River at Jenny Lind will be published in an annual "Report of Sacramento-San Joaquin Water Supervision", a publication of the Department of Water Resources.

The locations of the wells at which measurements were made, or water samples collected during the fall of 1955 and the spring of 1956, and the locations of the gaging stations reported herein are delineated on Plate 1.

Attention is directed to the fact that the elevations of the reference points and the descriptions of the well locations for the wells reported herein are contained in Table 1 of the First Supplement to Bulletin No. 11 published May 1956.

the only subject I have seen which is dominant & original  
and which I consider to be a great success, which has qualified me to speak  
of it at all. I am not sure that the one you mention is quite so good. However, I will  
not trouble you with my opinion of that, as I don't think it would be worth while. I want  
you to judge for yourself, and if you like it, I will be very glad to receive your opinion.  
I am not holding off from you, but I do not care to offend you by sending  
you a criticism of a picture which I have not had time to study. I am  
sure you will be pleased to receive my opinion, and I will be very glad to receive  
your opinion of my picture, and I will be very glad to receive your opinion of my picture.  
I am not holding off from you, but I do not care to offend you by sending  
you a criticism of a picture which I have not had time to study. I am  
sure you will be pleased to receive my opinion, and I will be very glad to receive your opinion of my picture.

TABLE 1  
DEPTHS TO GROUND WATER  
IN CALAVERAS UNIT,  
FALL OF 1955 AND SPRING OF 1956



TABLE 1

DEPTHS TO GROUND WATER IN CALAVERAS UNIT  
FALL OF 1955 AND SPRING OF 1956

Well number <sup>a</sup>	Fall, 1955		Spring, 1956	
	Date	Feet	Date	Feet
3N/7E-25G1	Oct. 18	66.6	Mar. 28	61.4
35C2	Oct. 18	57.5	Mar. 28	51.2
35L1	Oct. 18	56.0	Mar. 28	52.8
36D1	Oct. 18	65.2	Mar. 28	55.4
36K1	Oct. 18	66.8	Mar. 28	65.2
3N/8E-29G1	Oct. 18	78.5	Mar. 28	72.6
30H1	Oct. 18	73.9	Mar. 28	69.0
32P1	Oct. 18	73.9	Mar. 28	69.2
3N/9E-25R1	Oct. 19	41.8	Mar. 29	35.9
33J1	Oct. 19	62.2	Mar. 29	60.3
35H1	Oct. 19	54.0	Apr. 3	47.2
36G1	Oct. 19	78.3	Mar. 29	Oper.
3N/10E-31M1	Oct. 19	73.4	Mar. 29	69.2
2N/6E-12H1	Oct. 17	34.5	Mar. 28	25.2
13R1	Oct. 17	20.0	Mar. 28	25.0
24J2	Oct. 17	28.8	Mar. 28	26.6
26H1	Oct. 17	35.3	Mar. 28	24.9
26L2	Oct. 17	Oper.	Mar. 28	24.7
34K1 <sup>b</sup>	---	---	Feb. 28	26
36A1 <sup>b</sup>	Sept. 25	38	Feb. 28	35
36R3 <sup>b</sup>	---	---	Feb. 28	46
2N/7E- 1R2	Oct. 17	66.8	Mar. 28	62.3
3N3	Oct. 17	55.9	Mar. 29	45.0



TABLE I (continued)  
 DEPTHS TO GROUND WATER IN CALAVERAS UNIT,  
 FALL OF 1955 AND SPRING OF 1956

Well number	Fall, 1955		Spring, 1956	
	Date	Feet	Date	Feet
2N/7E- 5E1	Oct. 18	44.7	Mar. 29	38.4
5R1	Oct. 17	51.9	Mar. 29	40.5
8D1	Oct. 17	48.1	Mar. 29	38.5
8K3	Oct. 17	53.9	Mar. 29	39.3
9B2	Oct. 17	60.4	Mar. 28	45.0
11H1	Oct. 17	65.3	Mar. 28	55.1
14P1	Oct. 17	70.0	Mar. 29	53.5
15A1	---	---	Mar. 29	49.0
15C1	Oct. 17	68.0	Mar. 29	Oper.
16L1	Oct. 17	61.5	Mar. 28	45.8
18K1	Oct. 17	41.3	Mar. 29	31.6
20M1	Oct. 17	52.3	Mar. 28	31.9
23J2	Oct. 17	69.9	Mar. 28	58.0
24B1	Oct. 18	66.8	Mar. 28	59.2
26N1	Oct. 18	69.1	Apr. 2	54.2
27D1	Oct. 17	64.0	Mar. 29	52.8
31A1	Oct. 18	57.5	Mar. 29	37.3
31F1	Oct. 18	60.0	Mar. 29	40.1
32R1	Oct. 18	53.8	Apr. 2	38.9
33D1	Oct. 18	61.9	Apr. 2	46.8
33R1	Oct. 18	57.5	Apr. 2	42.4
35L1	Oct. 18	63.8	Apr. 2	Oper.
36H1	Oct. 19	65.0	Apr. 2	52.2

<i>Species</i>	<i>Common Name</i>	<i>Length</i>	<i>Width</i>	<i>Weight</i>
1.00	Common Gull	2.00	0.60	1.00
2.00	Common Gull	2.50	0.70	1.50
3.00	Common Gull	3.00	0.80	2.00
4.00	Common Gull	3.50	0.90	2.50
5.00	Common Gull	4.00	1.00	3.00
6.00	Common Gull	4.50	1.10	3.50
7.00	Common Gull	5.00	1.20	4.00
8.00	Common Gull	5.50	1.30	4.50
9.00	Common Gull	6.00	1.40	5.00
10.00	Common Gull	6.50	1.50	5.50
11.00	Common Gull	7.00	1.60	6.00
12.00	Common Gull	7.50	1.70	6.50
13.00	Common Gull	8.00	1.80	7.00
14.00	Common Gull	8.50	1.90	7.50
15.00	Common Gull	9.00	2.00	8.00
16.00	Common Gull	9.50	2.10	8.50
17.00	Common Gull	10.00	2.20	9.00
18.00	Common Gull	10.50	2.30	9.50
19.00	Common Gull	11.00	2.40	10.00
20.00	Common Gull	11.50	2.50	10.50
21.00	Common Gull	12.00	2.60	11.00
22.00	Common Gull	12.50	2.70	11.50
23.00	Common Gull	13.00	2.80	12.00
24.00	Common Gull	13.50	2.90	12.50
25.00	Common Gull	14.00	3.00	13.00
26.00	Common Gull	14.50	3.10	13.50
27.00	Common Gull	15.00	3.20	14.00
28.00	Common Gull	15.50	3.30	14.50
29.00	Common Gull	16.00	3.40	15.00
30.00	Common Gull	16.50	3.50	15.50
31.00	Common Gull	17.00	3.60	16.00
32.00	Common Gull	17.50	3.70	16.50
33.00	Common Gull	18.00	3.80	17.00
34.00	Common Gull	18.50	3.90	17.50
35.00	Common Gull	19.00	4.00	18.00
36.00	Common Gull	19.50	4.10	18.50
37.00	Common Gull	20.00	4.20	19.00
38.00	Common Gull	20.50	4.30	19.50
39.00	Common Gull	21.00	4.40	20.00
40.00	Common Gull	21.50	4.50	20.50
41.00	Common Gull	22.00	4.60	21.00
42.00	Common Gull	22.50	4.70	21.50
43.00	Common Gull	23.00	4.80	22.00
44.00	Common Gull	23.50	4.90	22.50
45.00	Common Gull	24.00	5.00	23.00
46.00	Common Gull	24.50	5.10	23.50
47.00	Common Gull	25.00	5.20	24.00
48.00	Common Gull	25.50	5.30	24.50
49.00	Common Gull	26.00	5.40	25.00
50.00	Common Gull	26.50	5.50	25.50
51.00	Common Gull	27.00	5.60	26.00
52.00	Common Gull	27.50	5.70	26.50
53.00	Common Gull	28.00	5.80	27.00
54.00	Common Gull	28.50	5.90	27.50
55.00	Common Gull	29.00	6.00	28.00
56.00	Common Gull	29.50	6.10	28.50
57.00	Common Gull	30.00	6.20	29.00
58.00	Common Gull	30.50	6.30	29.50
59.00	Common Gull	31.00	6.40	30.00
60.00	Common Gull	31.50	6.50	30.50
61.00	Common Gull	32.00	6.60	31.00
62.00	Common Gull	32.50	6.70	31.50
63.00	Common Gull	33.00	6.80	32.00
64.00	Common Gull	33.50	6.90	32.50
65.00	Common Gull	34.00	7.00	33.00
66.00	Common Gull	34.50	7.10	33.50
67.00	Common Gull	35.00	7.20	34.00
68.00	Common Gull	35.50	7.30	34.50
69.00	Common Gull	36.00	7.40	35.00
70.00	Common Gull	36.50	7.50	35.50
71.00	Common Gull	37.00	7.60	36.00
72.00	Common Gull	37.50	7.70	36.50
73.00	Common Gull	38.00	7.80	37.00
74.00	Common Gull	38.50	7.90	37.50
75.00	Common Gull	39.00	8.00	38.00
76.00	Common Gull	39.50	8.10	38.50
77.00	Common Gull	40.00	8.20	39.00
78.00	Common Gull	40.50	8.30	39.50
79.00	Common Gull	41.00	8.40	40.00
80.00	Common Gull	41.50	8.50	40.50
81.00	Common Gull	42.00	8.60	41.00
82.00	Common Gull	42.50	8.70	41.50
83.00	Common Gull	43.00	8.80	42.00
84.00	Common Gull	43.50	8.90	42.50
85.00	Common Gull	44.00	9.00	43.00
86.00	Common Gull	44.50	9.10	43.50
87.00	Common Gull	45.00	9.20	44.00
88.00	Common Gull	45.50	9.30	44.50
89.00	Common Gull	46.00	9.40	45.00
90.00	Common Gull	46.50	9.50	45.50
91.00	Common Gull	47.00	9.60	46.00
92.00	Common Gull	47.50	9.70	46.50
93.00	Common Gull	48.00	9.80	47.00
94.00	Common Gull	48.50	9.90	47.50
95.00	Common Gull	49.00	10.00	48.00
96.00	Common Gull	49.50	10.10	48.50
97.00	Common Gull	50.00	10.20	49.00
98.00	Common Gull	50.50	10.30	49.50
99.00	Common Gull	51.00	10.40	50.00
100.00	Common Gull	51.50	10.50	50.50

TABLE I (continued)  
 DEPTHS TO GROUND WATER IN CALAVERAS UNIT,  
 FALL OF 1955 AND SPRING OF 1956

Well number <sup>a</sup>	Fall, 1955		Spring, 1956	
	Date	Feet	Date	Feet
2N/8E- 3G2	Oct. 18	96.4	Mar. 29	84.1
4C1	Oct. 18	80.4	Apr. 3	72.4
8N1	Oct. 17	73.0	Mar. 28	63.1
9G2e	Oct. 17	75.3	Apr. 3	68.7
10H1	Oct. 17	98.2	Mar. 29	Oper.
11B1	Oct. 18	96.4	Mar. 29	75.7
12L1	Oct. 18	80.4	Mar. 29	75.5
13K1	Oct. 19	81.2	Mar. 29	74.8
14C1	Oct. 18	75.7	Mar. 29	70.9
15M2	Oct. 18	79.7	Mar. 28	68.0
16D1	Oct. 17	79.1	Mar. 28	63.9
18C1	Oct. 17	73.7	Mar. 28	57.8
19C3	Oct. 18	65.8	Mar. 28	58.3
19P2	Oct. 18	74.8	Mar. 28	59.2
20F1	Oct. 18	78.4	Mar. 28	62.9
21R1	Oct. 18	85.3	Apr. 3	63.4
24P1	Oct. 19	Oper.	Mar. 29	98.1
25P1	Oct. 19	Oper.	---	---
30H1	Oct. 18	74.1	Mar. 29	59.2
31N1	Oct. 19	69.1	Apr. 2	53.2
34E1	Oct. 19	70.6	Apr. 2	65.0
35C1	Oct. 19	74.4	Apr. 3	67.8
36L1	Oct. 19	77.2	Apr. 2	69.8

	$\text{H}_2\text{O}$	$\text{H}_2\text{O}$	$\text{H}_2\text{O}$	$\text{H}_2\text{O}$	$\text{H}_2\text{O}$
1.67	50,000	50,000	50,000	50,000	50,000
1.83	50,000	50,000	50,000	50,000	50,000
2.00	50,000	50,000	50,000	50,000	50,000
2.16	50,000	50,000	50,000	50,000	50,000
2.33	50,000	50,000	50,000	50,000	50,000
2.50	50,000	50,000	50,000	50,000	50,000
2.67	50,000	50,000	50,000	50,000	50,000
2.83	50,000	50,000	50,000	50,000	50,000
3.00	50,000	50,000	50,000	50,000	50,000
3.16	50,000	50,000	50,000	50,000	50,000
3.33	50,000	50,000	50,000	50,000	50,000
3.50	50,000	50,000	50,000	50,000	50,000
3.67	50,000	50,000	50,000	50,000	50,000
3.83	50,000	50,000	50,000	50,000	50,000
4.00	50,000	50,000	50,000	50,000	50,000
4.16	50,000	50,000	50,000	50,000	50,000
4.33	50,000	50,000	50,000	50,000	50,000
4.50	50,000	50,000	50,000	50,000	50,000
4.67	50,000	50,000	50,000	50,000	50,000
4.83	50,000	50,000	50,000	50,000	50,000
5.00	50,000	50,000	50,000	50,000	50,000
5.16	50,000	50,000	50,000	50,000	50,000
5.33	50,000	50,000	50,000	50,000	50,000
5.50	50,000	50,000	50,000	50,000	50,000
5.67	50,000	50,000	50,000	50,000	50,000
5.83	50,000	50,000	50,000	50,000	50,000
6.00	50,000	50,000	50,000	50,000	50,000

TABLE I (continued)

DEPTH TO GROUND WATER IN CALAVERAS UNIT,  
FALL OF 1955 AND SPRING OF 1956

Well number <sup>a</sup>	Fall, 1955		Spring, 1956	
	Date	Feet	Date	Feet
2N/9E- 3A1	Oct. 19	51.5	Apr. 3	45.2
4H1	Oct. 19	60.7	Mar. 29	57.4
5H1	Oct. 23	74.7	---	---
5L1 <sup>c</sup>	Oct. 19	29.6	Mar. 23	25.2
5N1	Oct. 19	93.3	Apr. 3	77.9
6F1	Oct. 19	83.1	---	---
7G2	Oct. 19	79.6	Mar. 29	78.4
9D1	Oct. 19	87.9	Mar. 29	77.5
17C1	Oct. 19	145.6	Apr. 3	144.2
2N/9E-18Q1	Oct. 19	96.0	Apr. 3	78.5
1N/6E- 1J1 <sup>b</sup>	Aug. 25	57	Feb. 28	57
3C1 <sup>b</sup>	Aug. 25	45	Feb. 28	36
3J1 <sup>b</sup>	Aug. 25	52	Feb. 28	39
4B1 <sup>b</sup>	Aug. 25	40	Feb. 28	16
4D1 <sup>b</sup>	Aug. 25	48	Feb. 28	27
12C3 <sup>bd</sup>	Aug. 29	80	---	---
13J1 <sup>b</sup>	Aug. 25	70	Feb. 28	54
14C1 <sup>b</sup>	Aug. 25	53	Feb. 28	44
1N/7E- 1M1	Oct. 19	57.2	Apr. 2	43.9
4P3	Oct. 18	60.8	Apr. 2	43.2
7E1 <sup>b</sup>	Oct. 30	60	Feb. 28	55

NAME	CLASS	SEX	AGE	WEIGHT
John	1st	M	10	100
Jane	2nd	F	12	110
Bob	3rd	M	14	120
Susan	4th	F	16	130
Mike	5th	M	18	140
Emily	6th	F	20	150
David	7th	M	22	160
Amy	8th	F	24	170
Chris	9th	M	26	180
Grace	10th	F	28	190
Mark	11th	M	30	200
Linda	12th	F	32	210
Kevin	13th	M	34	220
Sarah	14th	F	36	230
Tom	15th	M	38	240
Anna	16th	F	40	250
Benjamin	17th	M	42	260
Elizabeth	18th	F	44	270
Matthew	19th	M	46	280
Olivia	20th	F	48	290
James	21st	M	50	300
Emma	22nd	F	52	310
Michael	23rd	M	54	320
Alexis	24th	F	56	330
Christopher	25th	M	58	340
Isabella	26th	F	60	350
Matthew	27th	M	62	360
Olivia	28th	F	64	370
James	29th	M	66	380
Emma	30th	F	68	390
Michael	31st	M	70	400
Alexis	32nd	F	72	410
Christopher	33rd	M	74	420
Isabella	34th	F	76	430
Matthew	35th	M	78	440
Olivia	36th	F	80	450
James	37th	M	82	460
Emma	38th	F	84	470
Michael	39th	M	86	480
Alexis	40th	F	88	490
Christopher	41st	M	90	500
Isabella	42nd	F	92	510
Matthew	43rd	M	94	520
Olivia	44th	F	96	530
James	45th	M	98	540
Emma	46th	F	100	550
Michael	47th	M	102	560
Alexis	48th	F	104	570
Christopher	49th	M	106	580
Isabella	50th	F	108	590
Matthew	51st	M	110	600
Olivia	52nd	F	112	610
James	53rd	M	114	620
Emma	54th	F	116	630
Michael	55th	M	118	640
Alexis	56th	F	120	650
Christopher	57th	M	122	660
Isabella	58th	F	124	670
Matthew	59th	M	126	680
Olivia	60th	F	128	690
James	61st	M	130	700
Emma	62nd	F	132	710
Michael	63rd	M	134	720
Alexis	64th	F	136	730
Christopher	65th	M	138	740
Isabella	66th	F	140	750
Matthew	67th	M	142	760
Olivia	68th	F	144	770
James	69th	M	146	780
Emma	70th	F	148	790
Michael	71st	M	150	800
Alexis	72nd	F	152	810
Christopher	73rd	M	154	820
Isabella	74th	F	156	830
Matthew	75th	M	158	840
Olivia	76th	F	160	850
James	77th	M	162	860
Emma	78th	F	164	870
Michael	79th	M	166	880
Alexis	80th	F	168	890
Christopher	81st	M	170	900
Isabella	82nd	F	172	910
Matthew	83rd	M	174	920
Olivia	84th	F	176	930
James	85th	M	178	940
Emma	86th	F	180	950
Michael	87th	M	182	960
Alexis	88th	F	184	970
Christopher	89th	M	186	980
Isabella	90th	F	188	990
Matthew	91st	M	190	1000
Olivia	92nd	F	192	1010
James	93rd	M	194	1020
Emma	94th	F	196	1030
Michael	95th	M	198	1040
Alexis	96th	F	200	1050
Christopher	97th	M	202	1060
Isabella	98th	F	204	1070
Matthew	99th	M	206	1080
Olivia	100th	F	208	1090

TABLE I (continued)

DEPTH TO GROUND WATER IN CALAVERAS UNIT,  
FALL OF 1955 AND SPRING OF 1956

Well number <sup>a</sup>	Fall, 1955		Spring, 1956	
	Date	Feet	Date	Feet
1N/7E- 8F3	Oct. 18	61.4	Apr. 5	Oper.
8R1	Oct. 18	54.7	Apr. 2	47.2
11El	Oct. 18	59.8	Apr. 2	49.1
11G1	Oct. 18	63.9	Apr. 2	46.2

- a. Location descriptions of wells tabulated in Table 1, "First Supplement To Bulletin No. 11, San Joaquin County Investigation."
- b. Well owned and water levels measured by California Water Service Company.
- c. Water level indicates perched water table.
- d. 1N/6E-12C3 - Reference point - center of pneumatic gage, elevation 21 feet. Located 100 feet north of Sonora Street, 50 feet west of Della Street.
- e. 2N/8E-9G2 - Reference point - top of casing, elevation 87.0 feet. Located a few feet west of house, which is on the south side of Meyer Road and 0.4 mi. west of Duncan Road, 0.2 mi. south of Waterloo Road.



TABLE 2  
PARTIAL MINERAL ANALYSES  
OF GROUND WATER  
IN CALAVERAS UNIT



TABLE 2

PARTIAL MINERAL ANALYSES OF GROUND WATER  
IN CALAVERAS UNIT

Well number:	Date of sample	Chloride, : per million	Conductance, : Ec x 10 <sup>6</sup> at 25° C.
		in parts : per million	: at 25° C.
1N/6E- 3H3	7/13/56	134	691
4D1	11/16/55	52	490
	1/17/56	53	481
	5/14/56	50	529
	7/13/56	93	514
4J1	11/16/55	95	603
	5/14/56	65	547
	7/13/56	72	545
10E1	5/14/56	165	918
10E2	11/16/55	181	897
	1/17/56	173	831
	7/13/56	185	927
10P1	11/16/55	761	2,600
	1/17/56	742	2,559
	5/14/56	743	2,640
10P2	11/16/55	387	1,530
	5/14/56	397	1,575
14H1	11/16/55	38	395
	1/17/56	173	808
	5/14/56	82	420
	7/13/56	42	437

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TABLE 3  
COMPLETE MINERAL ANALYSES  
OF GROUND WATER  
IN CALAVERAS UNIT



TABLE 3  
COMPLETE MINERAL ANALYSES OF GROUND WATER  
IN CALAVERAS UNIT

Well number	Date of sample	Conductance, <sup>6</sup> at 25° C.	pH	Mineral constituents, in equivalents per million						Mineral constituents, in parts per million						
				Ca	Mg	Na	K	CO <sub>3</sub>	HCO <sub>3</sub>	Cl	SO <sub>4</sub>	NO <sub>3</sub>	F	B	SiO <sub>2</sub>	Total hardness as Na
2N/6E-28H1	8/31/55	279	8.1	0.27	0.09	2.39	0	2.48	0.20	0.07	0	0.10	0.2	47	19	
28K2	8/31/55	463	7.9	1.85	1.40	1.08	0	3.53	0.28	0.48	0.04	0.05	0.1	39	163	
1N/6E-3H3	9/13/55	414	8.0	0.24	0.10	3.91	0.02	0	3.26	0.85	0.33	0	0.0	0.76	60	17
4BL 10/12/55		317	8.4	0.90	0.56	1.96		0.24	2.64	0.42	0.12	0	0.1	43	73	
4D1 9/13/55		502	7.8	0.47	0.31	4.30	0.04	0	3.56	1.58	0	0.0	0.66	58	39	
3/15/56		498	7.8	0.35	0.34	4.30	0.03	0	3.46	1.57	0	0	0.02	0.55	62	
4J1 9/13/55		502	7.7	0.65	0.48	4.30	0.02	0	3.03	1.95	0.48	0	0.0	0.41	42	
3/15/56		537	7.9	0.57	0.37	4.32	0.02	0	3.05	2.11	0.08	0	0	0.39	44	
10E1 9/13/55		1,340	7.5	2.79	1.61	8.52	0.05	0	3.97	8.01	0.71	0.03	0.1	0.61	42	
10E2 3/15/56		865	8.1	1.18	0.76	6.18	0.03	0	2.86	5.03	0.21	0.01	0.04	0.45	43	
10P1 9/13/55		2,650	7.4	5.09	4.19	15.05	0.10	0	2.62	21.58	0.06	0.03	0.3	0.90	61	
10P2 9/13/55		1,500	8.0	2.35	1.73	9.57	0.07	0	3.13	10.60	0.08	0.03	0.0	1.0	60	
3/15/56		1,480	8.0	2.33	1.73	9.80	0.08	0	3.12	10.77	0	0.00	0	1.0	61	
13J1 9/1/55		298	7.9	0.60	0.31	1.98		0	2.48	0.34	0.07	0	0.2	50		



TABLE 3 (continued)  
COMPLETE MINERAL ANALYSES OF GROUND WATER  
IN CALAVERAS UNIT

Well number	Date of sample	Conductance, <sup>6</sup> Ecxl0 at 25° C.	Mineral constituents, in equivalents per million						Mineral constituents, in parts per million						Per cent hardness as NaCO <sub>3</sub>	
			pH	Ca	Mg	Na	K	CO <sub>3</sub>	HCO <sub>3</sub>	Cl	SO <sub>4</sub>	NO <sub>3</sub>	F	B	SiO <sub>2</sub>	
1N/6E-14Cl	9/13/55	540	7.8	1.50	0.65	3.04	0.04	0	2.70	2.43	0.27	0.00	0.0	0.27	47	107
14C2	9/13/55	522	7.9	0.90	0.60	3.48	0.03	0	2.74	2.28	0.12	0.00	0.0	0.41	52	75
14H1	9/13/55	394	8.1	0.14	0.42	3.39	0.03	0	3.00	0.99	0.11	0.00	0.0	0.76	60	28
3/15/56	405	8.0	0.35	0.29	3.44	0.03	0	3.03	1.14	0	0.00	0.08	0.57	63	32	



TABLE 4

Flow of Calaveras River at Bellota - 1955

TABLE 5

Flow of Calaveras River at Jenny Lind - 1955

TABLE 6

Flow of Calaveras River at Stockton - 1955

TABLE 7

Flow of Mormon Slough at Bellota - 1955

TABLE 8

Flow of Stockton Diverting Canal at Stockton - 1955



FLOW OF CALAVERAS RIVER AT BELLOTA - 1955<sup>a</sup>  
 Daily Mean Flow in Second-feet

Date	January	February	March	April	May	June	July	August	September	October	November	December
1	0.5	0.5 <sup>b</sup>		0	40	93	110	105			0	
2	0.4	1.0 <sup>b</sup>		0	34	86	108	105			0	
3	0.3	0.7		0	36	91	108	100			0	
4	0.2	0.3		0	37	94	107	101			0	
5	0.2	0.3		0	36	94	103	99			0	
6	0.2	0.3	N	0	51	94	105	96	N	N	0	
7	0.2	0.3	0	0	68	96	113	90	0	0	0	28
8	0.2	0.3		0	65	96	114	90 <sup>b</sup>			70	
9	0.3	0.3	F	0	58	97	116	65 <sup>b</sup>	F	L	L	70
10	0.5	0.1	L	0	53	101	116	45 <sup>b</sup>	O	O	0	70
11	0.3	0	W	0	52	100	112	45 <sup>b</sup>	W	W	W	68
12	0.2	0		0	53	95	100	28			63	
13	0.2	0		0	48	94	99	8.6			57	
14	0.2	0		0	46	92	107	9.1			47	
15	0.6	0		0	46	98	110	4.5			38	
16	1.9	0		0	46	103	109	0.7			32	
17	0.4	0		0	45	106	109	0.1			22	



TABLE 4 (continued)  
FLOW OF CALAVERAS RIVER AT BELLOTA - 1955<sup>a</sup>  
Daily Mean Flow in Second-feet

Date	January	February	March	April	May	June	July	August	September	October	November	December
18	3.6	0		30	40	107	105	0			4.8	
19	15	0		85	44	108	104	0.1			19	
20	34	0		92	54	108	105	0			129	
21	12	0		95	57	108	108	0			165	
22	2.5	0		92	66	108	108	0			193	
23	1.0	0	N	52	82	107	107	0	N	N	N	
24	0.7	0	O	34	84	106	108	0	O	O	O	
25	0.6	0		29	83	110	107	0				
26	0.6	0	F	35	84	114	111	0	F	F		
27	0.4	0	L	40	84	115	112	0	L	L	E	
28	0.4	0	O	34	88	112	110	0	O	O	C	
29	0.4	0	W	36	92	112	110	0	W	W		
30	0.4	0		40	94	110	110	0		R		
31	0.4	0			93	109	0			D		
Total Sec.												
Ft. Days	78.8	4.1	0	694	1,859	3,055	3,360	992.1	0	0	0	
Mean	2.5	0.1	0	23	60	102	108	32	0	0	0	
Ac. Ft.	156	8.0	0	1,376	3,687	6,060	6,664	1,968	0	0	0	

a Preliminary data, subject to revision.  
b Estimated.



TABLE 5

FLOW OF CALAVERAS RIVER AT JENNY LIND - 1955<sup>a</sup>  
Daily Mean Flow in Second-Feet

Date	January	February	March	April	May	June	July	August	September	October	November	December
1	1,570	237	20	0	60	178	152	176	0	0	9.2	
2	2,040	310	16	0	61	176	158	190	0	0	14	
3	736	249	13	0	61	174	162	183	0	0	38	
4	498	195	12	0	61	171	158	195	0	0	35	
5	205	169	11	0	65	171	154	178	N	0	26	
6	162	152	10	0	104	171	164	162	0	0	40	
7	135	137	9.8	0	118	174	185	154	0	0	414	
8	115	130	9.8	0	93	171	183	143	0	0	178	
9	108	122	10	0	93	176	180	88	F	F	0	117
10	393	117	10	0	93	192	178	52	L	L	0	162
11	288	113	9.8	0	93	174	164	65	0	0	113	
12	188	108	8.6	0	93	145	143	20	0	0	74	
13	145	102	7.1	0	93	145	156	7.6	W	0	56	
14	126	98	6.6	0	94	152	174	1.8	0	0	44	
15	141	94	5.8	5.0	94	174	174	0	0	0	37	
16	1,380	81	5.3	71	91	183	174	0	0	0	34	



TABLE 2 (continued)  
 FLOW OF CALAVERAS RIVER AT JENNY LIND - 1955<sup>a</sup>  
 Daily Mean Flow in Second-Feet

Date	January	February	March	April	May	June	July	August	September	October	November	December
17	954	32	5.3	102	64	183	174	0	0	0	34	
18	1,650	26	5.3	104	69	183	171	0	0	0	49	
19	2,940	12	4.4	115	88	183	174	0	0	0	314	
20	1,840	9.2	4.4	141	111	183	178	0	N	N	2,040	
21	729	8.0	3.5	113	109	180	185	0	N	N	0	1,210
22	435	6.6	4.0	74	122	174	183	0	0	0	0	2,890
23	340	6.2	4.0	28	141	162	180	0	0	0	0	10,500
24	297	5.3	4.0	23	160	160	185	0	F	F	0	10,300
25	275	5.3	2.1	31	162	160	200	0			0	8,940
26	254	4.8	0	62	162	158	254	0	L	L	0	7,670
27	237	71	0	60	162	158	208	0			0.5	6,850
28	215	36	0	59	158	156	195	0	0	0	6.6	5,520
29	198	0	59	156	154	188	0	W	W	W	6.6	3,810
30	188	0	60	178	154	183	0				6.2	2,890
31	200	0		178		176	0				2,040	
Mean	612	94.2	6.5	36.9	109	169	177	52.1			0.7	2,143
Ac. Ft.	37,650	5,230	400	2,200	6,720	10,070	10,900	3,200	Total Runoff in Acre-Feet		39	131,800
											208,209	

a. Preliminary data, subject to revision.



FLOW OF CALAVERAS RIVER AT STOCKTON - 1955<sup>a</sup>  
 Daily Mean Flow in Second-feet

Date	January	February	March	April	May	June	July	August	September	October	November	December
1	0			0	4.4	15	13	7.2				0
2	0			0	9.6	21	14	4.2				0
3	0			0	4.0	16	11	14.0 <sup>b</sup>				0
4	0		N	0	0	17	16	8.1 <sup>b</sup>				0
5	0		0	0	0	19	15	9.4	0	0		0
6	0		0	0	0	22	6.3	2.5				0
7	0		0	7.7	12	6.7	8.4					0
8	0	F	F	0	32	9.3	9.4	7.8	F	F		0
9	0	L	L	0	32	5.6	12	0.6	L	L		0
10	0	0	0	0	26	11	22	0	0	0		0
11	0	W	W	0	21	10	20	0	W	W		3L <sub>4</sub>
12	0	0	0	22	13	12	0					39
13	0	0	0	21	14	6.6	0					38
14	0	0	0	15	2.8	1.2	0					3L <sub>4</sub>
15	0	0	0	15	0	1.6	0					28
16	0	0	0	16	0	8.4	0					23
17	0	0	11	2.0	14	0						19
18	0	0	5.7	11	13	0						1L <sub>4</sub>



TABLE O (continued)  
FLOW OF CALAVERAS RIVER AT STOCKTON - 1955<sup>a</sup>  
Daily Mean Flow in Second-feet

Date	January	February	March	April	May	June	July	August	September	October	November	December
19	6.4			0	0	13	0.7	0				3.8
20	65			0	0	19	0	0			0	
21	33			0	1.4	11	7.2	0			155	
22	11			14 <sup>b</sup>	0.7	4.1	10	0			178	
23	3.9			30	11	4.6	15	0			296	
24	1.2			13	18	1.7	21	0			438 <sup>b</sup>	
25	0			4.4	24	0	19	0			406 <sup>b</sup>	
26	0			0.4	22	10	14	0			343	
27	0			0	22	19	15	0			282	
28	0			0.	15	12	13	0			184	
29	0			1.3	18	12	10	0			150	
30	0			0	23	14	2.7	0			129	
31	0			24		10	0				122	
Total Sec.	120.5			63.1	421.5	321.1	339.8	62.2	0	0	0	2,915.8
Ft. Days												
Mean	3.9	0	0	2.1	13.6	10.7	11	2.0	0	0	0	94.0
Ac. Ft.	239	0	0	125	836	637	674	123	0	0	0	5,783
												8,417
												Total Runoff in Acre-feet

<sup>a</sup> Preliminary data, subject to revision.  
<sup>b</sup> Estimated.



FLOW OF MORMON SLOUGH AT BELLOTA - 1955<sup>a</sup>  
 Daily Mean Flow in Second-feet

Date	January	February	March	April	May	June	July	August	September	October	November	December
1	1,690	263	46	0	1.2	70	48	33			0	0
2	2,240	338	31	0	4.8	74	45	34			0	0
3	998	314	24	0	14	65	49	29			0	0
4	419	251	22	0	6.0	64	44	34			0	0
5	251	210	20	0	5.0	72	36	34			0	0
6	180	187	17	0	11	64	33	27			N	0
7	148	168	14	0	50	66	53	17			O	142
8	122	154	12	0	35	61	54	17				141
9	197	144	12	0	33	62	60	1.1				46
10	561	135	13	0	44	70	64	0			F	
11	398	128	11	0	52 <sup>b</sup>	68	58	0			L	71
12	246	122	10	0	52 <sup>b</sup>	54	33	0			O	0
13	176	116	9.2	0	55	52	35	0			W	64
14	148	106	8.2	0	60	50	57	0				26
15	275	103	6.2	0	64	60	54	0				3.9
16	1,900	103	5.3	0	65	68	50	0			0	0
17	1,290	62	4.3	5.8	46	69	51	0			0	0
18	2,020	53	3.4	27	13	73	39	0				33



TABLE 7 (continued)  
FLOW OF MORMON SLOUGH AT BELLOTA - 1955<sup>a</sup>  
Daily Mean Flow in Second-feet

Date	January	February	March	April	May	June	July	August	September	October	November	December
19	3,560	33	3.4 <sup>b</sup>	14	11 <sup>b</sup>	74	35	0			71	
20	2,480	24	3.0 <sup>b</sup>	16	18 <sup>b</sup>	73	34	0			1,380	
21	1,080	20	2.2 <sup>b</sup>	30	24 <sup>b</sup>	74	36	0			1,250	
22	622	17	1.7 <sup>b</sup>	23	30 <sup>b</sup>	72	41	0			2,220 <sup>b</sup>	
23	462	16	1.3 <sup>b</sup>	20 <sup>b</sup>	37 <sup>b</sup>	65	41	0			N	
24	398	13	1.3 <sup>b</sup>	16 <sup>b</sup>	44 <sup>b</sup>	61	48	0			0	0
25	357	12	0.9	13 <sup>b</sup>	50	61	42	0			R	
26	323	11	1.3	9.5 <sup>b</sup>	62 <sup>b</sup>	59	72	0			E	
27	304	119	1.7	6.1 <sup>b</sup>	74	59	65	0			C	
28	276	87	1.7	2.7 <sup>b</sup>	66	52	52	0			L	
29	251		0.9	4.2	62	51	48	0			W	0
30	234		0	1.0	69	48	42	0			R	0
31	234	0			69	43	0				D	
Total Sec.												
Ft. Days	23,840	3,309	288	188.3	1,224	1,911	1,462	226.1	0	0	0	
Mean	769	118	9.3	6.3	39.5	63.7	47.2	7.3	0	0	0	
Ac. Ft.	47,290	6,563	571	373	2,428	3,790	2,900	448	0	0	0	

a Preliminary data, subject to revision

b Estimated.



FLOW OF STOCKTON DIVERTING CANAL AT STOCKTON - 1955  
Daily Mean Flow in Second-feet<sup>a</sup>

Date :	January :	February :	March :	April :	May :	June :	July :	August :	September :	October :	November :	December :
1	1,300	158	36	0	N	10	0					0
2	2,500	213	20	0	0	8.6	0					0
3	1,220	231	15	0		18	0					0
4	463	174	11	0	F	7.6	0					0
5	238	137	7.9	0	L	12	0					0
6	160	118	5.6	0	0	22	0					0
7	120	108	4.3	0	W	6.0	0					0
8	100	94	3.0	0	5.3	9.0	0					132
9	84	88	2.6	0	0.6	6.6	0					77
10	657	84	2.5	0	0	0.7	3.7					40
11	477	80	2.5	0	0	13	7.6	L				74
12	276	78	1.1	0	0	9.5	0.1	W				32
13	194	74	0.1	0	0	0.1	0					7.3
14	146	71	0	0	0.7	0	0					0.3
15	115	68	0	0	9.6	0	0					0
16	1,970	68	0	0	6.4	0	0					0
17	1,570	53	0	0	7.9	0.7	0					0
18	1,690	30	0	0	0.2	4.3	1.8					0
19	3,900	20	0	0	0	9.5	0					0.4
20	2,810	11	0	0	0	16	0					788



TABLE 8 (continued)

FLOW OF STOCKTON DIVERTING CANAL AT STOCKTON - 1955  
Daily Mean Flow in Second-feet<sup>a</sup>

Date	January	February	March	April	May	June	July	August	September	October	November	December
21	1,150	7.0	0	0	0	13	0					1,310
22	579	4.8	0	6.7	0	14	0					1,430
23	382 <sup>b</sup>	3.6	0	9.9	0	11	0	0	N			7,150 <sup>b</sup>
24	301 <sup>b</sup>	2.6	0	5.0	0	3.3	0	0	0	0		9,500 <sup>b</sup>
25	258 <sup>b</sup>	1.6	0	0.6	4.6	1.4	0					8,940 <sup>b</sup>
26	227 <sup>b</sup>	0.9	0	0	18	0.1	1.3	F	F	F		8,070 <sup>b</sup>
27	198 <sup>b</sup>	20	0	0	19	2.5	36	L	L	L		7,140 <sup>b</sup>
28	176	90	0	0	11	0	18	0	0	0		5,360 <sup>b</sup>
29	157	0	0	0.3	0	6.6	W					3,640 <sup>b</sup>
30	144	0	0	2.8	0	2.5						2,420 <sup>b</sup>
31	139	0	0	16	0	0.6						1,890 <sup>b</sup>
Total Sec. Ft. Days	23,701	2,088.5	111.6	22.2	102.4	198.9	78.2	0	0	0	0	58,001
Mean	765	74.6	3.6	0.7	3.3	6.6	2.5	0	0	0	0	1,871
Ac. Ft.	47,010	4,142	221	44	203	395	155	0	0	0	0	115,000
												167,170
												Total Runoff in Acre-feet

<sup>a</sup> Preliminary data, subject to revision.  
<sup>b</sup> Estimated.



## APPENDIX A

Supplemental Agreement Between the State Water Resources Board, the Stockton and East San Joaquin Water Conservation District, and the Department of Public Works.



## APPENDIX A

### SUPPLEMENTAL AGREEMENT BETWEEN THE STATE WATER RESOURCES BOARD, THE STOCKTON AND EAST SAN JOAQUIN WATER CONSERVATION DISTRICT, AND THE DEPARTMENT OF PUBLIC WORKS

THIS AGREEMENT, executed in quintuplicate, entered into as of October 1, 1955, by the State Water Resources Board, hereinafter referred to as the "Board"; the Stockton and East San Joaquin Water Conservation District, hereinafter referred to as the "District"; and the Department of Public Works of the State of California, acting through the agency of the State Engineer, hereinafter referred to as the "State Engineer":

### W I T N E S S E T H

WHEREAS, an investigation of the Calaveras River Area in San Joaquin County has been conducted by the Department of Public Works, acting by and through the agency of the State Engineer, between February 1948 and September 1955, and the results of said investigation are to be published pursuant to a cooperative arrangement between the Department and the County of San Joaquin whereby the work accomplished, including publication of the bulletin, was financed with funds contributed equally by the County and the State of California; and

WHEREAS, funds were appropriated to the Board by Item 213 of the Budget Act of 1955 for continuing work on ground water level and stream flow measurements, a quality of water check, and collection of crop survey records in the Calaveras River Area on a matching basis, pending accomplishment of solution of the water problems in the area; and

WHEREAS, by the State Water Resources Act of 1945, as amended, the Board is authorized to make investigations, studies, surveys, prepare plans and estimates, and make recommendations to the Legislature in regard to water development projects; and



WHEREAS, by said act, the State Engineer is authorized to cooperate with any county, city, State agency or public district on flood control and other water problems and when requested by any thereof may enter into a cooperative agreement to expend money in behalf of any thereof to accomplish the purposes of said act; and

WHEREAS, the District desires and hereby requests the Board to enter into a cooperative agreement for the making of ground water level and stream flow measurements, and a quality of water check in the Calaveras River Area between October 1, 1955, and September 30, 1956, and prepare a supplemental report thereon;

NOW THEREFORE, in consideration of the premises and of the several promises to be faithfully performed by each as herein-after set forth, the Board, the District, and the State Engineer do hereby mutually agree as follows:

#### ARTICLE I - WORK TO BE PERFORMED:

The work to be performed under this agreement shall consist of stream flow measurements and a series of ground water level measurements in the fall of 1955 and spring of 1956, a general water quality check of surface and underground waters in the Calaveras River Area, and the compilation and preparation of a report on the results of such measurements, water quality check and crop surveys.

The Board by this agreement authorizes and directs the State Engineer to proceed with the work to be performed, and further authorizes the State Engineer to contract with the District securing any portion of the necessary records and data required by this agreement.



During the progress of said investigation and report, all maps, plans, information, data and records pertaining thereto which are in the possession of any party hereto shall be made fully available to any other party for the due and proper accomplishment of the purposes and objects hereof.

The work under this agreement shall be diligently prosecuted with the objective of completion of the investigation and compilation of data and preparation of a report thereon on or before September 30, 1956, or as soon thereafter as possible.

#### ARTICLE II - FUNDS:

The District, upon execution by it of this agreement, shall transmit to the State Engineer the sum of One Thousand Dollars (\$1,000) for deposit, subject to the approval of the Director of Finance, into the Water Resources Revolving Fund in the State Treasury, for expenditures by the State Engineer in performance of the work provided for in this agreement. Also, upon execution of this agreement by the Board, the Director of Finance will be requested to approve the transfer of the sum of One Thousand Dollars (\$1,000) from funds made available to the Board by Item 213 of the Budget Act of 1955, as augmented, for expenditure by the State Engineer in performance of the work provided for in this agreement and the State Controller will be requested to make such transfer.

If the Director of Finance, within thirty (30) days after receipt by the State Engineer of said One Thousand Dollars (\$1,000) from the District, shall not have approved the deposit thereof into said Water Resources Revolving Fund, together with



the transfer of the sum of said One Thousand Dollars (\$1,000) from funds made available to the Board, for expenditure by the State Engineer in performance of the work provided for in this agreement, such sum contributed by the District shall be returned thereto by the State Engineer.

The Board and the State Engineer shall under no circumstances be obligated to expend for or on account of the work provided for under this agreement any amount in excess of the sum of Two Thousand Dollars (\$2,000) as made available hereunder and when said sum is exhausted, the Board and the State Engineer may discontinue the work provided for in this agreement and shall not be liable or responsible for the resumption and completion thereof.

Upon completion of and final payment for the work provided for in this agreement, the State Engineer shall furnish to the Board and to the District a statement of all expenditures made under this agreement. One-half of the total amount of all said expenditures shall be deducted from the sum advanced from funds appropriated to said Board, and one-half of the total amount of all said expenditures shall be deducted from the sum advanced by the District and any balance which may remain shall be returned to the Board, and to the District, in equal amount.

IN WITNESS WHEREOF, the parties hereto have executed this agreement to be effective as of the date hereinabove first written.

Approved as to Form and  
Procedure

STOCKTON AND EAST SAN JOAQUIN  
WATER CONSERVATION DISTRICT

/s/ Irving L. Neumiller  
Attorney for Stockton and East  
San Joaquin Water Conservation  
District

By /s/ Francis Grupe  
Chairman, Board of Directors



Approved as to Form and  
Procedure

STATE WATER RESOURCES BOARD

/s/ Henry Holsinger/mcn  
Attorney for Division of  
Water Resources

/s/ Clair A. Hill  
Clair A. Hill, Chairman

Approved as to Form and  
Procedure

State of California  
Department of Public Works

FRANK B. DURKEE  
Director of Public Works

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Attorney, Department of  
Public Works

By /s/ A. H. Henderson  
A. H. Henderson, Deputy  
Director of Public Works  
December 20, 1955

APPROVED:

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Director of Finance

/s/ Harvey O. Banks  
Harvey O. Banks  
Acting State Engineer

DEPARTMENT OF FINANCE  
A P P R O V E D  
December 29, 1955  
John M. Peirce, Director

/s/ Louis J. Heinzer  
Administrative Adviser













